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To: [Stan Van De Wetering](#)
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Subject: Re: Issues with termination of Oct ammocoete sampling
Date: 10/10/2006 12:18 PM

Thanks Stan.

I think at least we can get the first 'semi' - valid estimate of the 'whole body hazardous substance risk' for the ammocoetes - we got a lot more ammocoetes total than the 10 we had & they do exist in the ISA at even this time of year, so they exposed in the ISDA to what ever they are exposed to. The laboratory toxicity calibration (with wild caught Pacific ammocoetes) will give us at least a better first order standard for comparison that should give our tissue TRV HQs at least first order validity. The risk estimate will have an associated degree of uncertainty that may be acceptable if we consider other risk assessment, management/clean-up decisions all in concert.

What I think is the question immediately at hand is 'how do we decide to stop sampling in the ISA, particularly (I say...) in RM ~5-10. We did get a fuzzy glimpse on a snapshot of their spatial distribution at a particular time. We got something. It's useful, but not at all great. It's possible we may need to better refine our assessment of exposure and, ultimately, risk to these endpoints before a decision is possible.

Due to spatially & temporally concurrent industrialization, port modifications, harbor operations, or hazardous substance exposure, we can't be sure what reason low catch rates were achieved in this area. As you point out, seasonally affected water quality, velocity, habitat utility are changed seasonally and interannually thus affecting the distribution & abundance of particular receptors (e.g., ammocoetes...).

When you where out there with 'em I suspect you felt like you were searching for a relict suitable habitat 'needle' in the Portland Harbor haystack (i.e., the "secret" lamprey spots) & possibly at the wrong time. oh well, we tried...

I think we need to carefully reconsider the list of compounds and analytes we need to measure in the available sample. Look at the idea that maybe by dropping certain ones we can eek out a couple of samples from the mass we have been able to scrape out of the mid-ISA. Some sort information optimization from the available samples idea...

I'd for now propose that we try to get a few more of the biggish fish out of the OSM/below multinomah channel are (the 4-7 area) to complete a 'sample' thru 1500 tomorrow. If you get there, use the remaining time to continue to scour the 5-10 area (NOT AT PREDETERMINED LOCATIONS BUT WHERE ERIC OR DOC SAYS TO SAMPLE (with Stan's advice in mind)).

Ideally we get to: a lower ISA sample (~OSM), a 5-11 sample and 2 samples from 15-ish. Please!!!!

Finally. we may need to find a way to sample with this rig again in the spring as Stan recommends (I think, & maybe summer too...) but that might be a intra-government cooperative effort parallel to the risk assessment or addition 'uncertainty reduction driven' sampling for the RI/ERA ...

Ron

Stan Van De Wetering wrote:

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> Eric:
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> I wanted to raise some concerns re ending this falls ammocoete sampling
> sooner than later. I only have a few minutes so I will try to be as brief
> and direct as possible. First I want to say I was very impressed with the
> sampling crew and all the effort they are putting forth. They are a top
> notch group. I spent five or so hours with them on Monday. As I suspected I
> was of no real help as far as finding the "secret" lamprey spots. But it
> was very helpful to see what Thai Do and crew were finding and where they
> were finding it.
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> As I have mentioned in past meetings I feel it is important to keep in mind
> habitat availability in relation to the temporal scale. What we have
> observed in not so large coastal rivers is as follows:
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> 1) During the winter season your optimal velocity habitats are least
> available and found on the stream's margins. This season of course is the
> season that the river's overall morphology is set up based on various forces
> available during storm events.
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> 2) During the spring season or moderate flow season, you normally experience
> the greatest diversity in habs and or velocities. This allows for more
> "optimal" velocity hab availability overall. This allows for more access to
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> a greater range of substrate types during a period when more optimal
> microbial habitat is available as well (based on our limited research).

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> 3) During the summer or low water season you have just the opposite
> setting. Most of your winter high velocity habitats are now "dead" water.
> Most of your spring optimal velocity habitats are not available. Those
> substrates that were associated with the storm event that set up the river's
> morphology are likely still there but the optimal spring velocities, feeding
> lanes and microbial production etc have shifted significantly - in a
> negative direction. The optimal velocity habs are as limited as during the
> winter season.

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> So the point here is that it can be more difficult to find ammocoetes during
> the low flow period because the patchiness of habitat and in turn amms
> increases. Our coastal summer data show this very well. We have
> experienced sites where we move from a single plot in a sandy substrate that
> has a high level of microbial activity and several hundred ammocoetes per
> square meter to an adjacent plot (two feet over) with very limited
> microbial activity and very similar substrate and we see less than a few
> ammocoetes. Again this idea of patchiness and the ability to work that into
> a sampling design is difficult.

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> So my Monday with the crew suggested to me that we have some patchiness
> occurring in the harbor similar to other sites we have worked. This idea is
> supported by the results from Monday's work. Thai Do's crew took us back to
> a particular polygon that had very little sampling success. Thai chose to
> return to a single plot where a single (?) ammocoete had been found. We
> spent the next four hours working in that immediate plot "zone" if you will.
> As you know we found several other amms there and on a pretty consistent
> level - 2 or so per run. As we drifted out of that immediate plot zone we
> lost our ability to collect amms again. Again to me this supports this
> patchiness presence.

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> I think it would be of great use to the group to have Thai Do's crew spend
> some more time returning to the sites they have worked already and explore
> those specific plots where one or two amms were previously captured.
> Essentially repeat Monday's approach. If there is some consistency with
> catching amms in small patches then we can use those small patch data to
> better expand the data for the whole project. That is we could better
> expand fall rearing numbers per polygon.

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> There are a few other issues I want to make sure don't leave everyone's
> minds. First "we" seem to be assuming that when we catch only one amm in a
> sample plot that the result is an number that is abnormally low for the
> Willamette River as a whole - considering river mile zero to say 90. We
> have no leg to stand on here. We are not planning any upstream sampling to
> assist with a validation process. As well I am not aware of any general
> validation attempts or plans for. I think we need to keep that in mind if
> we all have plans to later argue over "real" pop estimate numbers for the
> harbor. This could be accomplished without a huge burden being incurred.
> There is also the issue of what appears to be an improvement in sampling
> methods that Thai and crew developed. This involves moving the sampler to
> three local plots during the three shock period. This appears to be more
> productive and it makes sense relative to our experiences on the coast.

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> OK thats it for me today!

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> Thanks again to Thai Do and crew! And thanks to everyone else for allowing
> me to get out for a day. I really appreciate it.

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> Stan van

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> ----- Original Message -----
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